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9-12-96
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Galloway et al.

SERIAL NO.: 08/481,685

FILED: June 7, 1995

FOR: MULTILAYER THERMOPLASTIC FILMS AND PACKAGES MADE THEREFROM

Group Art Unit:
1315

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(Registration No. 36,036)

Date: 8/22/96

AMENDMENTS

In the specification:

At page 1, after the section heading "BACKGROUND

OF THE INVENTION," please add the following paragraph:

"This application is a continuation-in-part application which claims priority from prior filed, copending application serial no. 08/082,226, filed June 24, 1993, now abandoned."

At page 9, line 6, after "30 gauge" add --(.1 to .3 mil)--.

At page 9, line 7, after "20 gauge" add --(.2 mil)--.

At page 9, line 8, after "30 gauge" add --(.2 to .3 mil)--.

At page 9, line 9, after "25 gauge" add --(.25 mil)--.

At page 9, line 10, after "55 gauge" add --(.35 to .45

mil)--.

At page 9, line 11, after "45 gauge" add --(.45 mil)--.

At page 9, line 12, after "125 gauge" add --(1.05 to 1.25 mils)--.

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At page 9, line 25, after "30 gauge" add --(.1 to .3 mil)--.

At page 9, line 26, after "20 gauge" add --(.2 mil)--.

At page 10, line 1, after "35 gauge" add --(.15 to .35 mil)--.

At page 10, line 2, after "25 gauge" add --(.25 mil)--.

At page 10, line 3, after "55 gauge" add --(.35 to .55 mil)--.

At page 10, line 4, after "gauge" add --(.45 mil)--.

At page 10, line 5, after "120 gauge" add --(1.00 to 1.20 mils)--.

At page 10, line 5, after "110 gauge" add --(1.10 mils)--.

At page 10, line 7, after "40 gauge" add --(.20 to .40 mils)--.

At page 10, line 7, after "30 gauge" add --(.30 mils)--.

In the claims:

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1. (Amended) A heat shrinkable, multiple layer polymeric film, comprising:
- (a) a first barrier layer, said first barrier layer having two opposing surfaces; and
- (b) second and third layers, said first barrier layer being disposed between said second and third layers, said second layer [and third layers] comprising [a polymer or] an ethylene alpha-olefin copolymer formed by a polymerization reaction in the presence of
- 117

3-
[with] a single site catalyst, said ethylene alpha-olefin copolymer having a molecular weight distribution of less than 2.5 and a I_{10}/I_2 ratio of about 7 to 12, or blends of from about 1% to about 99% of [a polymer or] an ethylene alpha-olefin copolymer formed by a polymerization reaction with a single site catalyst and from about 99% to about 1% ethylene vinyl acetate;

wherein said film is irradiated.

4. (Amended) A multiple layer polymeric film as in claim 1, wherein said first barrier layer has a thickness of between about .10 [10] and about .30 mil [30 gauge].

3-
5. (Amended) A multiple layer polymeric film as in claim 1, wherein said first barrier layer has a thickness of about .20 mil [20 gauge].

6. (Amended) A multiple layer polymeric film as in claim 1, wherein said second layer has a thickness of between about .40 [40] and about .50 mil [.50 gauge], and wherein said second layer is an inner sealant layer.

7. (Amended) A multiple layer polymeric film as in claim 5, wherein said second layer has a thickness of about .45 mil [45 gauge].

8. (Amended) A multiple layer polymeric film as in claim 1, wherein said third layer has a thickness of between about 1.10 [110] and about 1.20 mils [120 gauge].

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9. (Amended) A multiple layer polymeric film as in claim 1, wherein said third layer has a thickness of about 1.15 mil [115 gauge].

10. (Amended) A multiple layer polymeric film as in claim 1, wherein said first barrier layer has a thickness of about .20 mil [20 gauge], said second layer has a thickness of about .45 mil [45 gauge], and said third layer has a thickness of about 1.15 mils [115 gauge].

12. (Amended) A heat shrinkable, multiple layer polymeric film, comprising:

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AA
- (a) a first barrier layer, said first barrier layer having first and second opposing surfaces;
 - (b) a second inner sealant layer, said second layer comprising either 100% of [a polymer or] an ethylene alpha-olefin copolymer formed by a polymerization reaction in the presence of [with] a single site catalyst or a blend of from about 1% to about 99% of [a polymer or] an ethylene alpha-olefin copolymer formed by a polymerization reaction in the presence of [with] a single site catalyst, said ethylene alpha-olefin copolymer having a molecular weight distribution of less than 2.5 and a I_{10}/I_2 ratio of about 7 to about 12, and from about 99% to about 1% ethylene vinyl

- acetate, said second layer adjacent to said first surface of said first layer; and
- (c) a third outer layer, said third layer comprising either 100% of [a polymer or] an ethylene alpha-olefin copolymer formed by a polymerization reaction in the presence of [with] a single site catalyst or a blend of from about 1% to about 99% and from about 99% to about 1% ethylene vinyl acetate, said second layer adjacent to said second surface of said first layer;

wherein said film is irradiated.

15. (Amended) A multiple layer polymeric film as in claim 10, wherein said first barrier layer has a thickness of about .20 mil [20 gauge], said second layer has a thickness of about .45 mil [45 gauge], and said third layer has a thickness of about 1.15 mils [115 gauge].

17. (Amended) A heat shrinkable, multiple layer polymeric film, comprising:

- (a) a first barrier layer, having first and second opposing surfaces;
- (b) second and third adhesive layers disposed on opposing surfaces of said first layer;
- (c) a fourth layer comprising ethylene vinyl acetate and disposed adjacent to said third layer; and

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19. (Amended) A multiple layer ~~polymeric~~ film as in claim 17 [16], said first barrier layer comprising ethylene vinyl acetate copolymer.

20. (Amended) A multiple layer polymeric film as in claim 17 [13], wherein said first barrier layer has a thickness of about [20 gauge] .20 mil, said second and third layers each has a thickness of about [25 gauge] .25 mil, said fourth layer has a thickness of about [45 gauge] .45 mil, and said fifth layer having a thickness of about [115 gauge] 1.15 mils.

21. (~~Amended~~) A package made from the film of claim 17 [13].

REMARKS

These amendments and accompanying remarks are in response to the Office Action dated April 18, 1996. Also submitted is a Declaration of Prior Invention Under 37 CFR 1.131, an Affidavit Under 37 CFR 1.132, an Information Disclosure Statement and Fee, and a Petition and Fee for a three-month extension of time. Claims 1-21 are pending in the case. All of claims 1-21 have been amended.

Applicant respectfully requests that the Examiner reconsider claims 1-21 in view of these amendments and accompanying remarks.

Rejections Under 35 USC §112

The Examiner has rejected claims 1-21 under 35 USC §112, second paragraph on the grounds that the claims are indefinite for failing to particularly point out and distinctly claim the invention. The Examiner maintains that the claims are indefinite because they recite layer thicknesses using the term "about" and, as stated by the Examiner, "the term about as used is relative in nature and does not particularly point out and distinctly claim the subject matter."

The applicant is respectfully referred to the decision of the Court of Appeals for the Federal Circuit in Andrew Corp. v. Gabriel Electronics, 847 F.2d 819 (Fed. Cir. 1988).

In Andrew, the plaintiff Andrew Corporation appealed a district court decision holding Andrew's patent on a horn reflection antenna invalid. The claims at issue contained terms such as "'approach each other,' 'close to,' 'substantially equal,' and 'closely appropriate,'". See id. at 821. The district court held that the claims were too vague to satisfy the requirement of 35 USC §112, second paragraph and that the claims did not particularly point out and distinctly claim the invention.

On appeal, the CAFC reversed the decision of the district court. The CAFC determined that the terms contained in the claims "are ubiquitous in patent claims." Id. The CAFC explained as follows:

"Such usages, when serving reasonably to describe the claimed subject matter to those of skill in the field of the invention, and to distinguish the claimed subject matter from the prior art, have been accepted in patent examination and upheld by the courts. Id."

Citing W.L. Gore & Associates, Inc. v. Garlock Inc., 842 F.2d 1275, 1280 (Fed. Cir. 1988), the court added that the phrase "about 100% per second" does not render a claim invalid under 35 USC §112, second paragraph.

The applicant respectfully asserts that the term "about" in describing film layer thicknesses and in describing other physical properties of polymeric films is common in patents in the field of polymeric films, and thus

has a recognized meaning among persons of ordinary skill in the art. The Examiner is respectfully referred to the following patents in the field of polymeric films, all of which use the term "about" in the claims for claiming a certain thickness or range of thickness:

U.S. Patent No. 4,505,970, to Craver (claim 8)

U.S. Patent No. 4,501,780, to Walters (claim 5)

U.S. Patent No. 4,469,742, to Oberle (claim 6)

U.S. Patent No. 4,444,828, to Anthony (claims 6, 7, 9, 11)

U.S. Patent No. 4,418,841, to Eckstein (claims 2, 5, 6, 8-15, 23-25, 28-30)

U.S. Patent No. 4,364,989, to Moyle (claim 4)

U.S. Patent No. 4,169,910, to Graboski (claims 10-13, 26-28)

The Examiner has also rejected claims 4-10, 15 and 20 under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. The Examiner has asserted that those claims are indefinite because they recite the film thicknesses in units of ganges, and "gauges are usually used as dimensions for railroads, shotguns, and wires and not for film thicknesses which are usually defined by more traditional units, microns or mils."

In response to the rejection, claims 4-10, 15 and 20 have been amended to recite the film thickness in mils. The specification has also been amended to include the

corresponding film thickness in mils.

The Examiner has rejected claim 20 under 35 USC §112, second paragraph, as being indefinite for lacking an antecedent basis for the fourth and fifth layers. Claim 20 has been amended so that it is now dependent on claim 17.

Prior Art Rejections

The Examiner has rejected claims 1, 2, 11-13, 16-18 and 21 under 35 USC §102(e) as being anticipated by U.S. Pat. No. 5,374,459, to Mumpower et al. The Examiner has also rejected claims 1-21 under 35 USC §103 as being unpatentable over U.S. Pat. No. 5,397,603, to Georgelos, in view of U.S. Pat. No. 4,457,960, to Newsome.

In response to these rejections, applicant first notes that the applicants have claimed priority under 35 USC §120 from U.S. patent application Serial No. 08/082,226, abandoned May 15, 1996 in favor of pending file wrapper continuation application 08/653,520. Applicant asserts that all of the requirements for claiming priority under 35 USC §120 are met in this case.

Prior application serial no. 08/082,226 has at least one common inventor with the present application. Specifically, serial no. 08/082,226 has the following common inventors with the present application:

Keith D. Lind
George H. Walbrun
Johnny Q. Zheng

As set forth in the amendments submitted herewith, the specification has been amended to recite that the application claims priority from serial no. 08/082,226.

The specification of serial no. 08/082,226 discloses the subject matter of this application "in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same," as required by 35 USC §112.

Additionally, in response to these rejections, the applicant respectfully submit the enclosed Declaration of Prior Invention to Overcome Cited Patent or Publication under 37 CFR 1.131. As set forth in the affidavit, the invention of this subject matter by the named inventors is prior to the effective date of the Mumpower reference under 35 USC §102(e), April 6, 1993, and prior to the effective date of the Georgelos reference under 35 USC §102(e), July 12, 1993.

Claims 1-2, 4-12, and 14-19 have been rejected under 35 USC §103 as unpatentable over U.S. Pat. No. 4,457,960, to Newsome, in view of the prior art article by Van der Sanden and U.S. Pat. No. 4,894,107, to Tse. Claims 1, 3, 13 and 20-21 have been rejected as unpatentable over Newsome in view of Van der Sanden, Tse, and U.S. Pat. No. 4,400,428, to Rosenthal. As stated by the Examiner, Van der Sanden teaches that single site catalyst LDPE's "have lower seal initiation temperatures, higher toughness and strength

than conventional LDPEs and EVAs."

In response to these rejections, claims 1-21 have been amended to recite the limitations of ethylene alpha olefin copolymers formed by a polymerization reaction in the presence of a single site catalyst, wherein the ethylene alpha olefin copolymers have a molecular weight distribution of less than 2.5 and have a melt flow rate ratio of about 7 to about 12. The claimed ethylene alpha olefin copolymers have surprising results over other ethylene alpha olefin copolymers formed from a polymerization reaction in the presence of a single site catalyst. As set forth in the attached Affidavit of Keith D. Lind under 37 CFR 1.132, heat shrinkable polymeric films having a barrier layer and outer layers of a blend of EVA and an ethylene alpha olefin copolymer formed from a polymerization reaction in the presence of a single site catalyst wherein the ethylene alpha-olefin copolymers have a flow rate ratio of from 7 to 12, were compared with similar films in which the ethylene alpha-olefin copolymer formed from a polymerization reaction in the presence of a single site catalyst had a flow rate ratio of less than 7. The films made with the polymer of from 7 to 12 flow rate ratio had surprising results over the other films.

The Van der Sanden reference is cited by the Examiner for its disclosure of single site catalyst LDPEs having lower seal initiation temperatures, and higher

toughness and strength. There is no disclosure in Van der Sanden of the flow rate ratio of the single site catalyst polymers, nor of any favorable results that arise from the use of ethylene alpha-olefin copolymers formed from a polymerization reaction in the presence of a single site catalyst having range of molecular weight distribution and flow rate ratio contained in the claims. Additionally, while Van der Sanden teaches the favorable property of narrow molecular weight distribution, it does not teach the particular range recited in claims 1-21.

It is respectfully submitted that in view of the Affidavit of Keith D. Lind under 37 CFR 1.131, the rejection of claims 1, 2, 4-12, and 14 to 19 as obvious over Newsome in view of the Van der Sanden article, and the rejection of claims 1, 3, 13, 20 and 21 over Newsome in view of the Van der Sanden article, Tse, and Rosenthal, have been overcome.

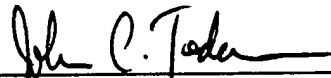
The claims have also been amended to more accurately describe the invention by including the limitation that the films of the invention are "heat shrinkable". Support for this limitation can be found throughout the specification, including, for example, at page 1, third paragraph. Additionally, the claims have been amended to better describe the "single site catalyst" polymer as an ethylene alpha-olefin copolymer which is formed by a polymerization reaction "in the presence of" a single site catalyst. Support for this amendment can be

found in the specification at pages 11-14.

In view of the above amendments and accompanying remarks, and in further view of the enclosed declarations, it is believed that all rejections have been overcome.

Applicants request that a Notice of Allowance be issued for all of claims 1-21.

Respectfully submitted,



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